CLAIMS

What is claimed is:

1. A method of providing trophic support for neurons in a mammal, comprising administering to said mammal a therapeutically effective amount of TS or a neurotrophic variant thereof.

2. The method of Claim 1, further comprising co-administering a synergistic amount of a mammalian neurotrophic factor.

3. The method of Claim 2, wherein said mammalian neurotrophic factor is CNTF or LIF.

4. The method of Claim 1, wherein said variant comprises the amino acid sequence of peptide C44 (SEQ ID NO:12).

5. The method of Claim 1, wherein said variant comprises the amino acid sequence of peptide C14 (SEQ ID NO:14).

6. The method of Claim 1, wherein said variant is a fusion protein comprising

   i) TS or a neurotrophic variant thereof; and

   ii) a fusion partner.

7. The method of Claim 6, wherein said fusion protein comprises the amino acid sequence of peptide C14 (SEQ ID NO:14).

8. The method of Claim 6, wherein said fusion protein comprises an amino acid sequence in which the amino acid sequence of peptide TR1 (SEQ ID NO:32) occurs at least twice.

9. The method of Claim 6, wherein said fusion partner is a mammalian neurotrophic factor.

10. The method of Claim 9, wherein said neurotrophic factor is CNTF or LIF.

11. The method of Claim 1, wherein said mammal has a condition selected from the group consisting of amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, Chagas' disease, peripheral neuropathy, palsies, multiple sclerosis, stroke, brain trauma, spinal cord trauma and peripheral nerve trauma.

12. The method of Claim 1, wherein said mammal is a human.

13. A method of providing trophic support for neurons in a mammal, comprising administering to said mammal a therapeutically effective amount of a peptide comprising the amino acid sequence of peptide C14 (SEQ ID NO:14) or a neurotrophic variant thereof.

14. The method of Claim 13, further comprising co-administering a synergistic amount of a mammalian neurotrophic factor.

15. The method of Claim 14, wherein said neurotrophic factor is CNTF or LIF.

16. The method of Claim 13, wherein said peptide further comprises an amino-terminal protecting group, a carboxyl-terminal protecting group or a combination thereof.

17. The method of Claim 13, wherein said mammal has a condition selected from the group consisting of amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, Chagas' disease, peripheral neuropathy, palsies, multiple sclerosis, stroke, brain trauma, spinal cord trauma and peripheral nerve trauma.

18. The method of 13, wherein said mammal is a human.

19. A method of stimulating the secretion of interleukin-6 in a mammal, comprising administering to said mammal a therapeutically effective amount of TS or an IL-6 secretion-inducing variant thereof.

20. The method of Claim 19, wherein said variant comprises an amino acid sequence in which the amino acid sequence of peptide TR1 (SEQ ID NO:32) or an IL-6 secretion-inducing variant thereof occurs at least twice.

21. The method of Claim 19, wherein said variant is a fusion protein comprising

i) TS or an IL-6 secretion-inducing variant thereof; and

ii) a fusion partner.

22. The method of Claim 20, wherein said mammal is a human.

23. A method of stimulating the secretion of interleukin-6 in a mammal, comprising administering to said mammal a therapeutically effective amount of a peptide comprising an amino acid sequence in which the amino acid sequence of peptide TR1 (SEQ ID NO:32) or an IL-6 secretion-inducing variant thereof occurs at least twice.

24. The method of Claim 23, wherein said peptide further comprises an amino-terminal protecting group, a carboxyl-terminal protecting group or a combination thereof.

25. A neurotrophic peptide, comprising the amino acid sequence of peptide C14 (SEQ ID NO:14) or a neurotrophic variant thereof.

26. The peptide of Claim 25, further comprising an amino-terminal protecting group, a carboxyl-terminal protecting group or a combination thereof.

27. A composition, comprising the peptide of Claim 25 and a physiologically acceptable carrier.

28. The composition of Claim 27, further comprising a mammalian neurotrophic factor.

29. The composition of Claim 28, wherein said neurotrophic factor is CNTF of LIF.

30. A fusion protein, comprising the peptide of Claim 25 and a fusion partner.

31. The fusion protein of Claim 30, wherein said fusion partner is a mammalian neurotrophic factor.

32. The fusion protein of Claim 31, wherein said neurotrophic factor is CNTF or LIF.

33. A composition, comprising the fusion protein of Claim 30 and a physiologically acceptable carrier.

34. An IL-6 secretion-inducing peptide, comprising an amino acid sequence in which the amino acid sequence of peptide TR1 (SEQ ID NO:32) or an IL-6 secretion-inducing variant thereof occurs at least twice.

35. The peptide of Claim 34, further comprising an amino-terminal protecting group, a carboxyl-terminal protecting group or a combination thereof.

36. A composition, comprising the peptide of Claim 34 and a physiologically acceptable carrier.

37. A fusion protein, comprising the peptide of Claim 34 and a fusion partner.

38. A composition, comprising the fusion protein of Claim 37 and a physiologically acceptable carrier.

39. A composition, comprising TS or a neurotrophic variant, a mammalian neurotrophic factor and a physiologically acceptable carrier.

40. A method of providing trophic support for glial cells in a mammal, comprising administering to said mammal a therapeutically effective amount of TS or a neurotrophic variant thereof.

41. A method of providing trophic support for glial cells in a mammal, comprising administering to said mammal a therapeutically effective amount of a peptide comprising the amino acid sequence of peptide C14 (SEQ ID NO:14) or a neurotrophic variant thereof.